

DEVELOPMENT OF NEW SERVICES FOR THE SWEDISH
LIBRARY OF TALKING BOOKS AND BRAILLE.

By

Barry Hampshire

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**M.C. MIGEL LIBRARY
AMERICAN PRINTING
HOUSE FOR THE BLIND**

English
Library
Hampshire
Stockholm

Development of New Services for the Swedish Library of Talking
Books and Braille

Abstract

DEVELOPMENT OF NEW SERVICES FOR THE
SWEDISH LIBRARY OF TALKING BOOKS AND BRAILLE

The Swedish Library of Talking Books and Braille (SLTB) is a national library established in 1974. The library's main task is to provide access to information for visually impaired persons. The library's collection consists of talking books, Braille books, and Braille audio cassettes. The library also provides Braille transcription services. The library's services are available to all visually impaired persons in Sweden. The library's collection is growing rapidly, and the library is developing new services to meet the needs of its users.

by

Barry HAMPSHIRE

SRF Tal & Punkt AB
Stockholm, Sweden

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The Swedish Library of Talking Books and Braille

The Swedish Library of Talking Books and Braille (TPB) was set up on 1 January 1980 as an official body and took over the library functions previously carried out by the Swedish Association of the Visually Handicapped (SOF).

The main functions of TPB are as follows.

Development of New Services for the Swedish Library of Talking Books and Braille

Abstract

The function of the Swedish Library of Talking Books and Braille (TPB) is briefly described. The increasing trend towards the de-centralising of loans for talking books is emphasised. With this trend the provision of up-to-date catalogues and new accessions lists has become more important and TPB now use a central library database to register all their new acquisitions.

The major braille printing house in Sweden, SRF Tal & Punkt AB is also briefly presented. Tal & Punkt makes extensive use of machine-readable media in the production of braille, and have recently established a new computerised braille production unit in the north of Sweden for the production of TPB's books. Use is also made of magnetic tapes obtained from the central library database in order to produce TPB's catalogues in braille.

As a consequence, about 10,000 titles a year are produced by the library for Swedish publishing companies.

TPB, and to a lesser extent Swedish Library Services Ltd., are the only "publishers" of talking books in Sweden. The books produced are mainly newly published works but some old titles are selected each year from older publications.

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The Swedish Library of Talking Books and Braille

The Swedish Library of Talking Books and Braille (TPB) was set up on 1 January 1980 as an official body and took over the library functions previously carried out by the Swedish Federation of the Visually Handicapped (SRF).

The main functions of TPB are as follows:

- to provide visually impaired and other handicapped persons with literature, collaborating for this purpose with other libraries in Sweden. It particularly rests with the library to

- 1) produce and lend talking books and books in braille,

- 2) furnish information and advice within its sphere of activity.

- with regard to lending of talking books, the library concentrates on acting as a lending centre for inter-library loans and deposit collections.

TPB initiates the production of the major part of the 2 000 talking book titles for general library use that are produced annually. Some 400 of these titles are children's books. The annual production of braille books for the library consists of some 300 - 350 titles. As a comparison, about 10 000 titles a year are produced for the sighted by Swedish publishing companies.

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The Library has no studios of its own or copying resources, neither has it any braille production resources of its own. Each year the Library sends out a tender for the production of its talking

and braille books to a number of producers, both private and state-supported. Of these SRF Tal & Punkt AB is the most important supplier of both talking books and braille books.

During the first decade of talking books, visually impaired people got their books mainly from the central library within SRF. Subsequently the public libraries extended their services and TPB has, in conformity with the Parliamentary decision of 1977, developed increasingly until, so far as the loan of talking books is concerned, it has become the lending centre for the public libraries.

In recent years the public libraries have, to an increasing extent, built up their own stocks of talking books. Talking book borrowers in Sweden usually apply to their local library or to their appropriate regional library. At his or her local library a borrower can get more personal advice and service than from a central and special library and they have the opportunity of sharing the library's other information provision and service. Moreover being able to borrow on this basis is an example of the normalisation through integration that is the aim of Swedish policy for the handicapped as a whole.

In contrast with talking books, library activities in connection with braille books are concentrated to TPB. Provision through the public libraries does take place but not to any great extent.

This strong trend towards a more de-centralised loan system of talking books has made the provision of up-to-date catalogues and new accessions lists of major importance for TPB. These catalogues, which are produced in inkprint (with a somewhat larger type size), braille, microfiche and on cassette are particularly important to the public libraries in their information service to borrowers and in their provision of books from TPB's considerable stocks.

From 1981 TPB has initiated co-operation with Library Services Ltd (BTJ) which means that TPB's newly acquired talking and braille books can be registered in BTJ's database, BUMS. TPB's list of new acquisitions and catalogues are produced from the BUMS database. Magnetic tapes from this database are utilised for the production of braille catalogues and new accessions lists. We will consider this production in more detail below.

SRF Tal & Punkt AB

SRF Tal & Punkt AB is a production company owned by the Swedish Federation of the Visually Handicapped (SRF). This company is run according to ordinary commercial principles with the aim of attaining an economic balance which will permit the continuing development in the provision of special reading materials for the visually impaired and to provide the employees with employment security.

Tal & Punkt's main activities are the production of recorded and braille material of all types. In addition it has its own offset printing department, small publishing department and administers a database of all registered visually impaired persons in Sweden and others who subscribe to the various publications produced by Tal & Punkt.

Tal & Punkt's braille production facilities are almost exclusively computerised. Up to May 1984 production of TPB's books were carried out mainly by home transcribers on a free-lance basis - Tal & Punkt does not have any volunteer workers. During 1982 - 1984 approximately 50 titles have been produced using ordinary commercial compositors. This experimental production formed the basis for establishing a new production unit in Kiruna, in the very north of Sweden, with the explicit purpose of improving the production of library books. This will mean that the home transcribers will be reduced quite substantially during the coming year or so as the new production unit begins and increases its production.

Tal & Punkts computerised facilities in both Stockholm and Kiruna utilise micro-computers. Extensive use is currently made of material which is already in machine-readable form. For example, magazines, ranging from weekly to bi-monthly, are produced from text sent via modem from a commercial printing house; books, including the new translation of the New Testament, are produced from 1/2" magnetic tapes obtained from printing houses; material written on word processors, Versabaille, etc. are also received in machine-readable form and form a significant proportion of the printing house's production.

Expanding the range of materials that can be fed into the production system, together with the development of use of new media for the visually impaired, e.g. synthetic speech, paperless braille cassettes, represent the main development areas within Tal & Punkt's printing house.

Production of Braille Books for TPB

Until recently all braille books for TPB were produced using the traditional method. That is a braille transcriber copied the book using a Perkins braillewriter. These transcribers work at home and are employed on a free-lance basis. After proof-reading and correcting, also carried out mainly by home workers, the books are sent to a sheltered workshop for binding.

The traditional method has a number of advantages. The Perkins braillewriter is well-proved and reliable, therefore, there is little disruption of production because of machine failure. Furthermore, they are relatively cheap and therefore can be quickly replaced by a reserve machine in the event of any breakdown while the broken machine is under repair. The production process involves only a few production stages, therefore, production is quite easy to administer. Finally, as the transcribers work at home, running costs for such a production system are low.

There are, however, a number of disadvantages associated with this type of production. For example, only single copies can be produced from the Perkins; if copies are required these must be produced by vacuum-forming onto plastic. This implies that archiving of books can only be in the form of the paper original. This is very demanding with regard to the space required and, therefore, expensive.

Another difficulty with using home transcribers is that of recruiting and training. Although some of the home transcribers are dependant on their income from braille transcribing, it is hardly a lucrative profession. Furthermore in a country such as Sweden, with a small population spread over a large area, training courses, refresher courses, etc are difficult to arrange.

Partly because of these disadvantages and partly because of the general development policy within Tal & Punkt, it was decided to establish a braille production centre in Kiruna. Kiruna, which lies approximately 150 km. inside the Arctic Circle, is one of Sweden's major iron-ore mining centres. In recent years the iron-ore industry has been experiencing a crisis and this has caused mass unemployment in Kiruna as well as extensive migration south. In order to try and reverse this trend the local authorities and central government have tried to attract new, high-technology industry to the area by offering generous establishment grants, reduced taxes, etc.

Thanks to these grants and reduced costs it was possible for Tal & Punkt to raise sufficient capital to establish a production unit for, in the first hand, braille books for TPB.

The Kiruna production unit uses Ericsson Step/One micro-computers. This computer has a specification essentially similiar to the IBM PC. In all there are 10 such computers. These are used to code in the books, convert the text to braille, (contracted if

ordered), production of proof-copy in coded inkprint, correcting the text, dividing the text into pages and printing out the text via a Braillo 270 braille printer.

The operating system used is a multi-tasking one, that is several different programs can run simultaneously and a new text editing program designed originally for the printing industry has been incorporated. The code structure used by this program is based on the principle that each unique meaning is assigned a unique code in the computer, even if different meanings are represented by the same character in print. Such a system is particularly appropriate for braille production as braille has only a fixed number of characters available (i.e. 64). It is common, therefore, that the braille system uses context to distinguish the various meanings which have been assigned to any particular braille character. In this text editing program each meaning is coded differently in the computer although each code would cause the same braille character to be printed. Different characters would be produced, however, in the inkprint used for proof-reading and this type of coding makes conversion between different media straightforward.

Other major components in the system are the Braillo 270 braille printer. This printer can emboss braille on both sides of the paper at a speed of approx. 270 characters a second. A magnetic tape unit has also been interfaced to one of the computers. This has two main functions, firstly to archive books, one tape reel can store ca. 30 million characters. The other main function is as a means of reading in text to the system from similar magnetic tapes from printing houses, databases, etc - at present the closest one can come to a standardised magnetic storage media. The books will also be bound on the premises using the Wire-0 method. The paper has the holes for the Wire-0 binding elements punched during its manufacture so eliminating an extra punching stage during binding. Once the sheets have been cut to size and collated the Wire-0 elements can be fed directly through the paper sheets.

A number of improvements are expected from this new production unit for braille books. Delivery time should be reduced simply due to the fact that the whole production process is carried out under the same roof. Books will no longer have to be sent by post to transcribing, proof-reading, correcting and binding as is necessary with home transcribers.

Centralising the whole production will also allow better control of production, both with regard to delivery times and to quality control. Furthermore recruitment and training should not be so difficult. Basic operation of the computers requires no special training other than that required for ordinary word processors. Training in the special aspects relating to braille can be carried out in-house.

In addition it will be possible to offer a number of new services which were not possible with the traditional method. For example, it will be possible to offer archiving of books on magnetic tape quite cheaply. New copies will also be able to be printed out and bound quickly and cheaply when requested.

By producing books with help of computers new developments with regard to new methods of inputting material and output of media other than braille on paper can be incorporated where appropriate. Some of these will be discussed below.

Inevitably the change over from a simple, mechanical production system to a computerised one will bring problems. Despite the grants obtained, the establishment of the production unit in Kiruna represents a considerable investment for Tal & Punkt. This implies a greater demand for efficient working routines and production planning than existed with the traditional method. The production system in itself is considerably more complex than the traditional method. The equipment used is more complex and there are more discrete stages within the production process. The opportunities for disruption of production for technical

reasons are therefore correspondingly greater.

Some of the potential advantages of the new production will not be realised from the very beginning. Initially, all books will be keyed into the computers manually. This keyboard input accounts for a considerable proportion of the total production time and costs. We intend, therefore, later this year to utilise a Kurzweil Data Entry Machine which a large printing house in Stockholm has recently bought. By being able to deliver books to Kiruna in machine-readable form some capacity will be available for other, more profitable work, not necessarily involving braille production at all.

A fundamental principle in the design of the Kiruna facility and also in the development of the printing house in Stockholm is that the production system must be able to cope with production of ordinary inkprint, and other special media for the visually impaired than just braille on paper.

A more obvious way of delivering books in machine-readable form would be to utilise the compositors' tapes from which the inkprint originals were produced. This is a method which Tal & Punkt has utilised on a number of occasions. There are, however, a number of problems with their use on a larger scale.

These problems are mainly administrative. The majority of Swedish publishing companies do not have their own compositing or printing departments; they use instead a number of private companies for production which means that there can be many different systems used for production of books for the same publisher. A more difficult problem, however, is that few publishing companies keep copies of their published books in machine-readable form. A much more common form of archive is offset plates. This means that when a book is finally ready for release the compositor's tape has usually been erased.

With regard to copyright there is no general agreement regulating the availability of composers' tapes in Sweden. In those cases where permission has been sought to utilise such material for braille production, it has been granted in the majority of cases, with varying degrees of control over their use and their cost. Hopefully, some kind of general agreement will be worked out in the near future although at the moment nothing definite has been planned.

Production of Catalogues

With the increasing de-centralisation of talking book loans, the dissemination of information to public libraries and even to individuals has become correspondingly more important.

At the moment catalogues are available in five different media, namely:

- inkprint (large print)
- braille
- cassette
- microfiche
- via BUMS terminals in libraries

With regard to the production of catalogues and new acquisition lists in braille, Tal & Punkt has begun to utilise magnetic tapes obtained directly from the BUMS data base at BTJ.

De-coding these tapes was not entirely straightforward as BUMS uses a 9 bit code in order to be able to represent additional alphabets e.g. Greek, Cyrillic, etc. and all the various accented letters.

Tal & Punkt now has a program which can handle these tapes. It both cleans the tapes from unwanted codes, converts the text

to braille and also inserts some special codes for formatting the text after correcting.

During the year July 1984 - June 1985 TPB plans to produce the following catalogue material in braille:

- 10 new acquisition lists for talking and braille books (approx. 2 400 titles altogether)
- A year catalogue of braille books produced during 1984 (approx. 400 titles)
- A total catalogue of children's books in braille (approx. 1 600 titles)
- A total catalogue of books for adults: supplement 1981 - 1984 (approx. 1 000 titles)

This type of material is well suited to a written reading medium, therefore, the availability of this material in braille is considered important - despite the fact that there are fewer than 300 borrowers of braille books in Sweden. There are, however, approximately 1 500 people who read braille and many of these use braille catalogues when they want to choose a talking book.

There are, however, disadvantages with braille catalogues. The first is that they can be bulky and therefore awkward to use. This is specially true of the larger total catalogues which can consist of many volumes. This is doubly irritating for the individual who is perhaps only interested in just a few sections from the catalogue.

These catalogues are also produced in between 200 and 500 copies. They are produced in this quantity as these catalogues are printed from stereotype plates and there is relatively little difference in cost between producing one hundred and several hundred copies. Therefore an archive is created which is expected to last for as long as the material is of interest to readers. With the new production unit in Kiruna it will be possible to offer another type of production service with regard to catalogue material.



By storing the finished text on magnetic tape it will be possible to take out certain parts of the total material, print them in braille and distribute them. In this way it will not be necessary to print the whole catalogue but individuals will be able to order just those sections that can be of interest to them. This will make these catalogues more usable and will reduce costs for TPB.

Use of new media forms, such as paperless braille cassettes, also present interesting alternative means for distributing catalogues and new acquisitions lists. Such material on Versabraille cassette, for example, would make such material much less bulky to handle yet still retain some of the advantages of having the material in written form. The advantages of having a book format for skimming through would, of course, be lost but if the text was suitably structured the Versabraille or similar machine have quite effective search functions. Production costs associated with the production of these media would also be considerably cheaper than printing.

What of the Future?

The general development of computer and information technology offers many new possibilities for providing the visually handicapped with the information they require. Society today consumes more and more information and at an ever increasing rate. This trend is perhaps most evident in the area of employment. More and more jobs demand that employees can handle information - either written such as reports, memos, etc. or information in some other form such as from computers or other electronic equipment. This same trend is, however, noticeable even in the area of leisure activities, for example, the enormous expansion in magazine publication, computer games, and so on.

In order for the visually handicapped not to be left behind, they must be able to gain access to this information as well. In this respect, computers and technology can hold a promise of being able, in principle, to transform these different forms of information to a form that is directly available to the visually handicapped.

At the same time the increasing rate of technical development holds a threat to the information handicapped by constantly producing new media forms and even greater possibilities for the consumption of information. Inevitably these new developments are often heavily dependent on the visual sense, for example, the use of graphics in information presentation, windowing techniques in the most recent micro-computer operating systems, touch control, etc.

It is, therefore, most important for organisations and companies working in the area of information provision for the visually handicapped to try and keep pace with the general developments going on around us. Only by working with these new technologies can we see both their potential and their hazards for those that are information handicapped.

With this background, both TPB and SRF plan to increase their use of computers into their respective organisations. This is essential if these two organisations are to be able to utilise the possibilities for rationalisation which computerisation offers and still maintain, or even increase, the number of visually handicapped employees. Thus, the developments described above are only a first step in learning how to utilise new technology and new media for the visually handicapped.

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NEW YORK, N. Y. 10011

